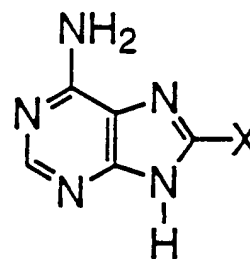
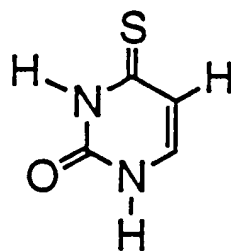
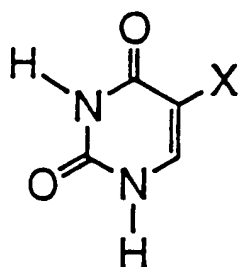


1/35



X=Br, 5-bromouracil

X=I, 5-iodouracil

X=N₃, 5-azidouracil

4-thiouracil

X=N₃, 8-azidoadenine

X=Br, 8-bromoadenine

FIG. 1

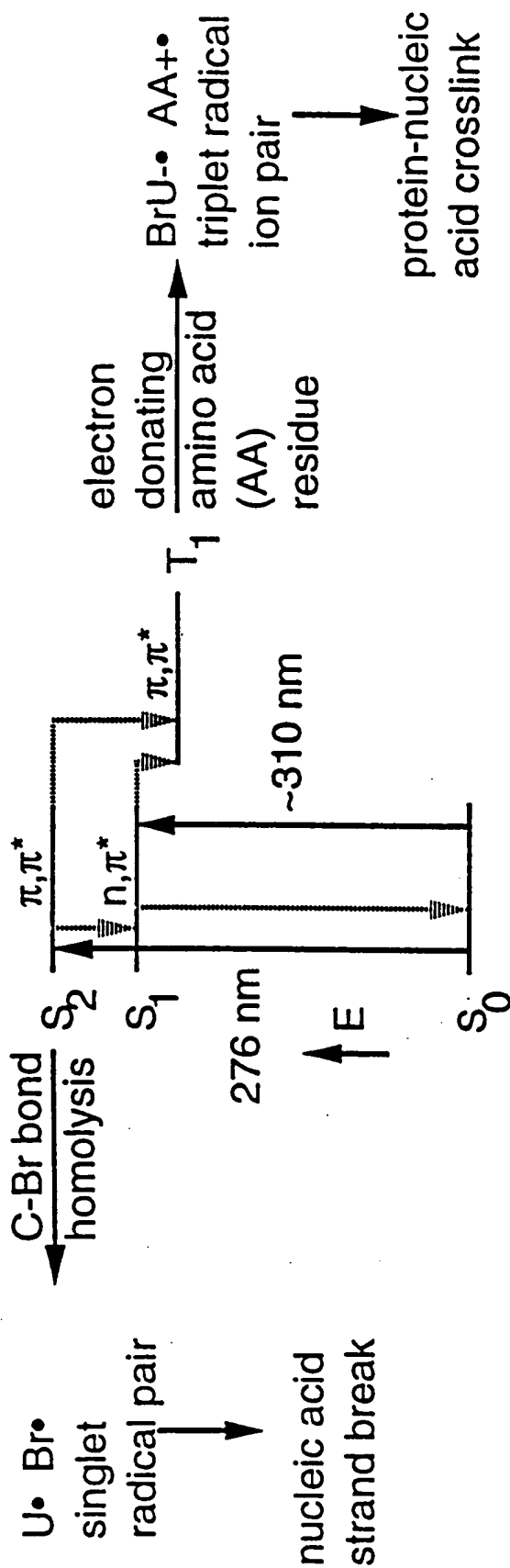


FIG. 2

3/35

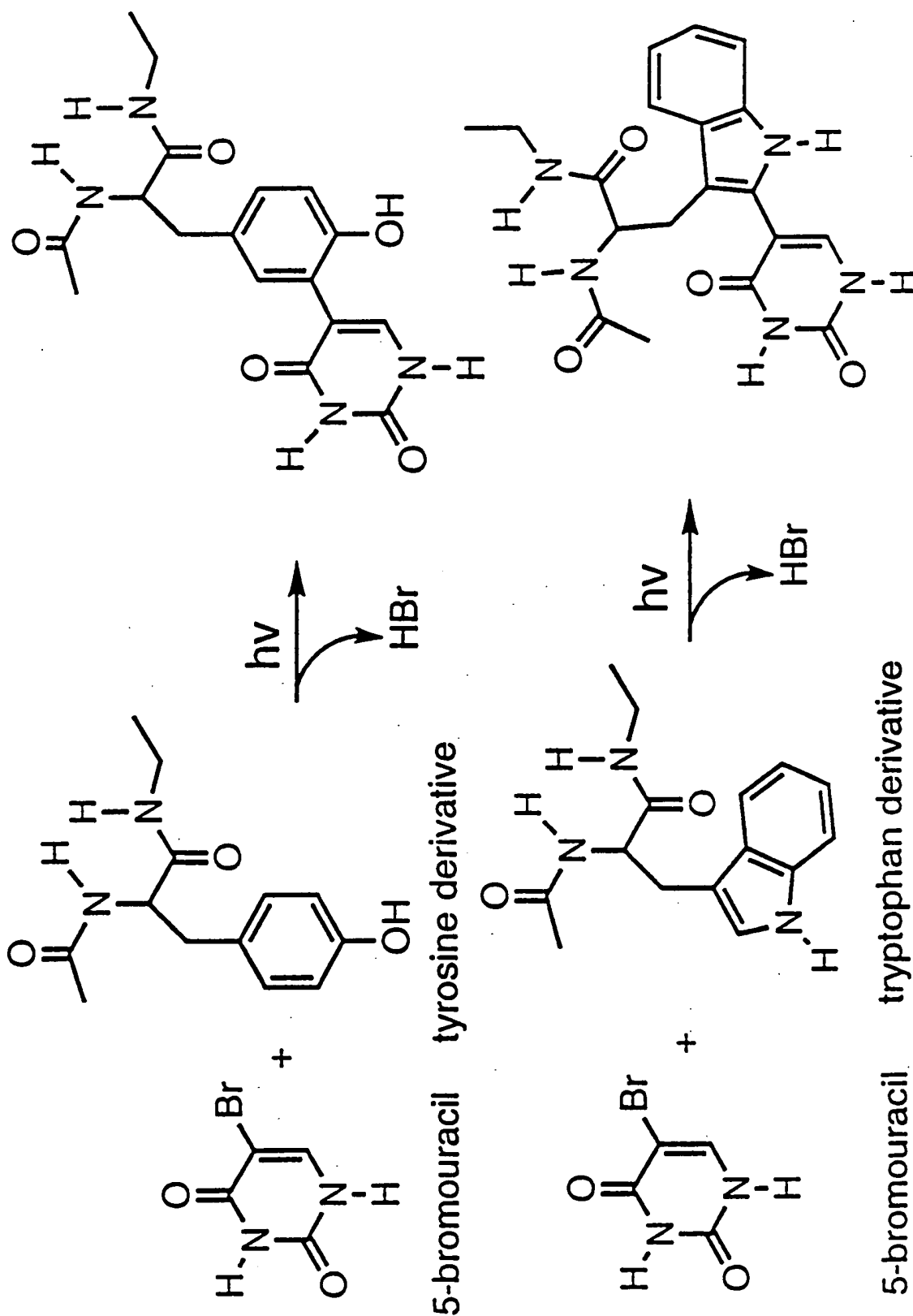


FIG. 3

4/35

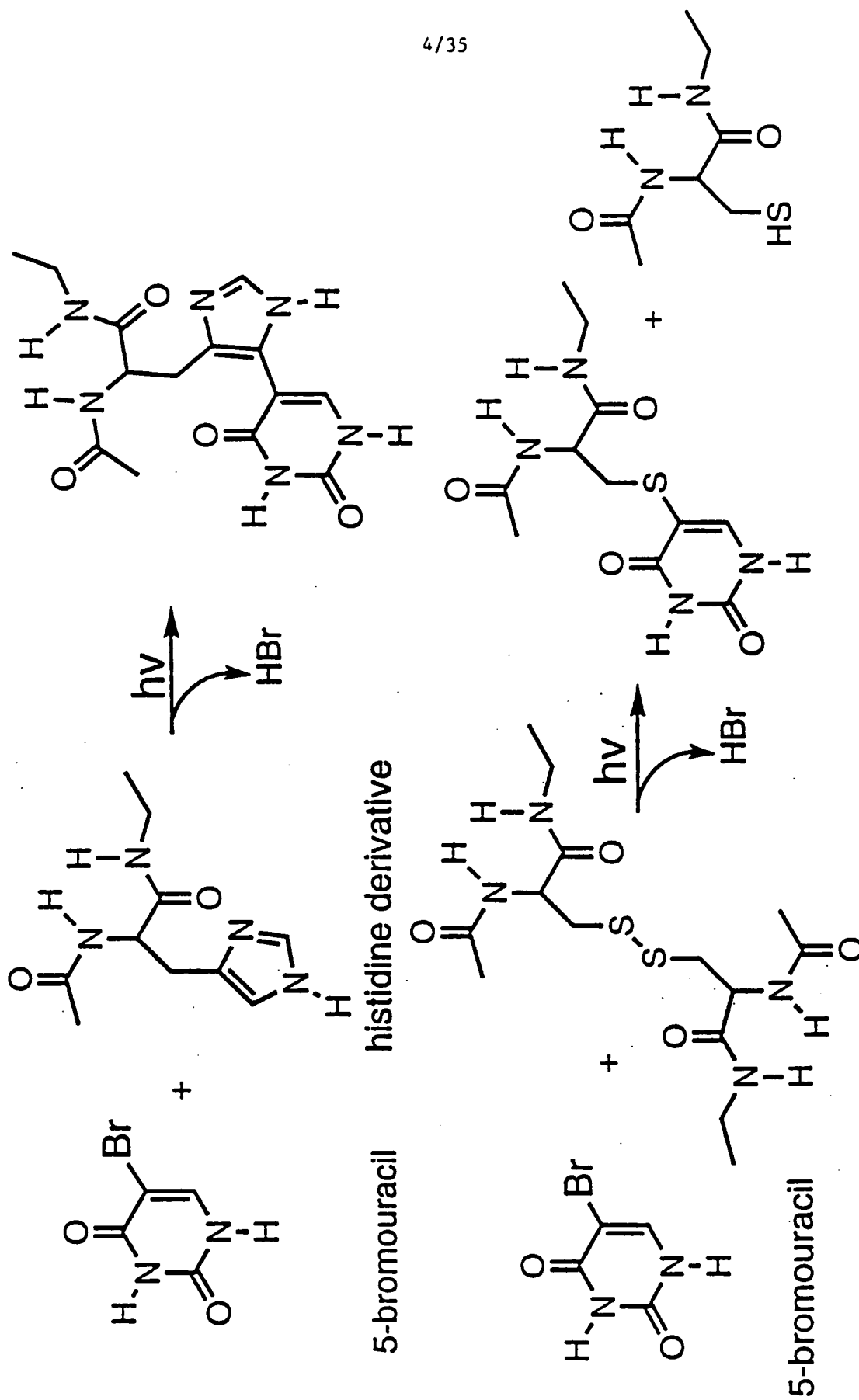


FIG. 3 (CONT'D)

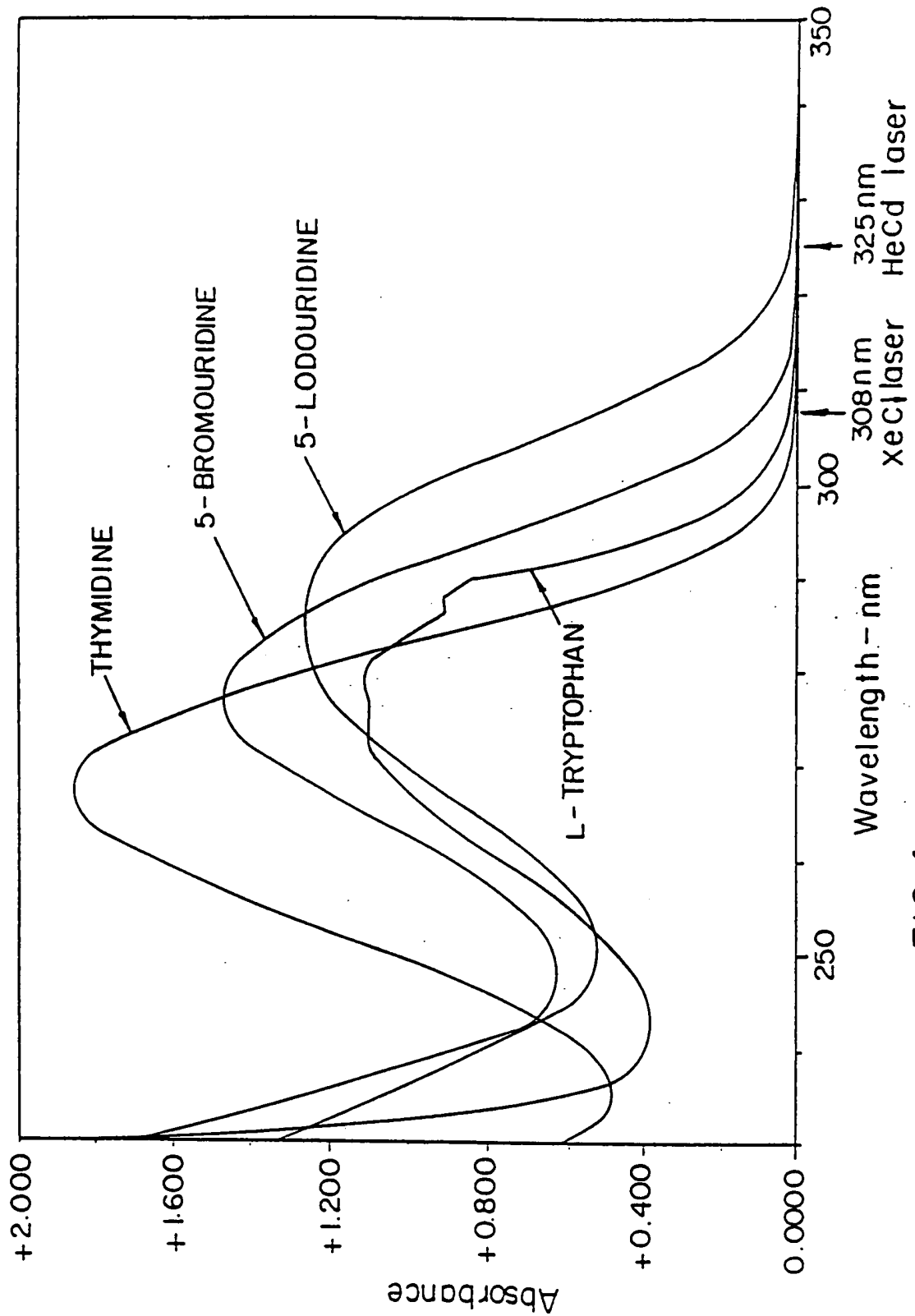
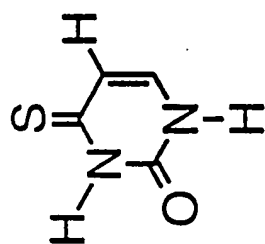
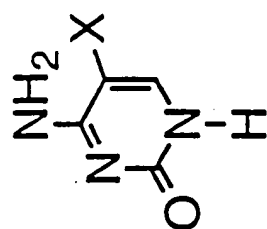
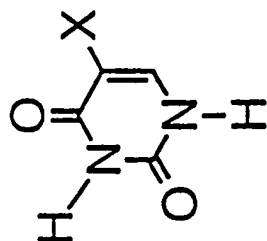


FIG. 4



4-thiouracil



X=Br, 5-bromouracil

X=I, 5-iodouracil

X=CH₂=CHBr, bromovinyluracil

X=CH₂=CHI, iodovinyluracil

X=N₃, 5-azidouracil

X=Br, 5-bromocytosine

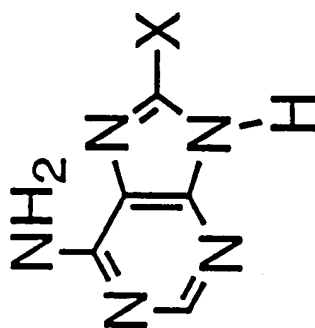
X=I, 5-iodocytosine

X=CH₂=CHBr, bromovinylcytosine

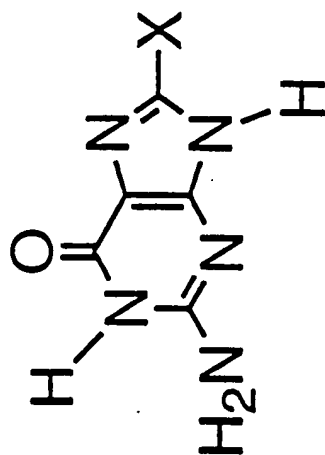
X=CH₂=CHI, iodovinylcytosine

X=N₃, 5-azidocytosine

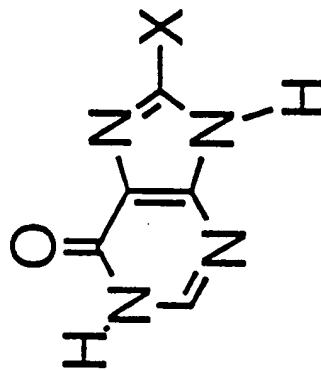
FIG. 5



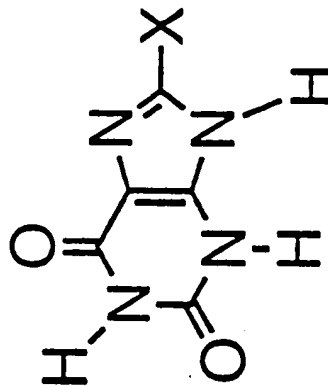
X=N₃, 8-azidoadenine
X=Br, 8-bromoadenine
X=I, 8-iodoadenine



X=N₃, 8-azidoguanine
X=Br, 8-bromoguanine
X=I, 8-iodoguanine



X=N₃, 8-azidohypoxanthine
X=Br, 8-bromohypoxanthine
X=I, 8-iodohypoxanthine



X=N₃, 8-azidoxanthine
X=Br, 8-bromoxanthine
X=I, 8-iodoxanthine

FIG. 5 (CONT'D)

8/35

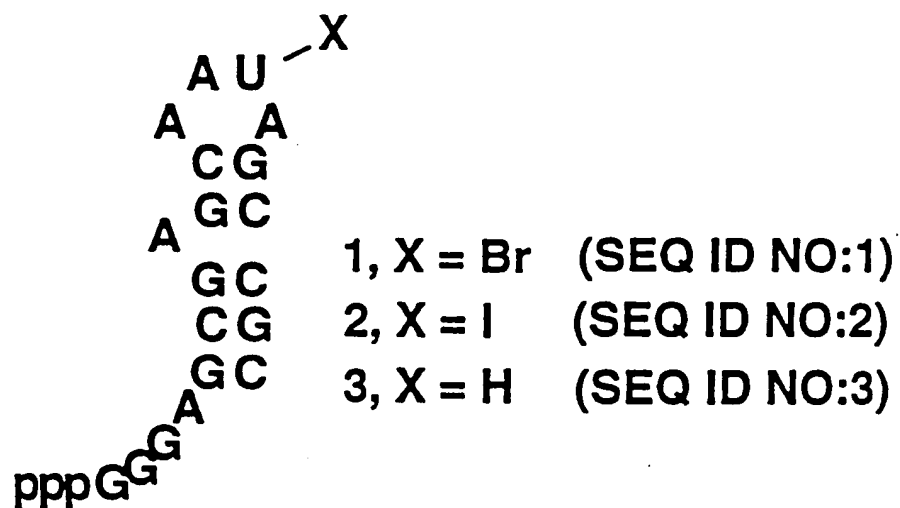


FIG. 6

9/35

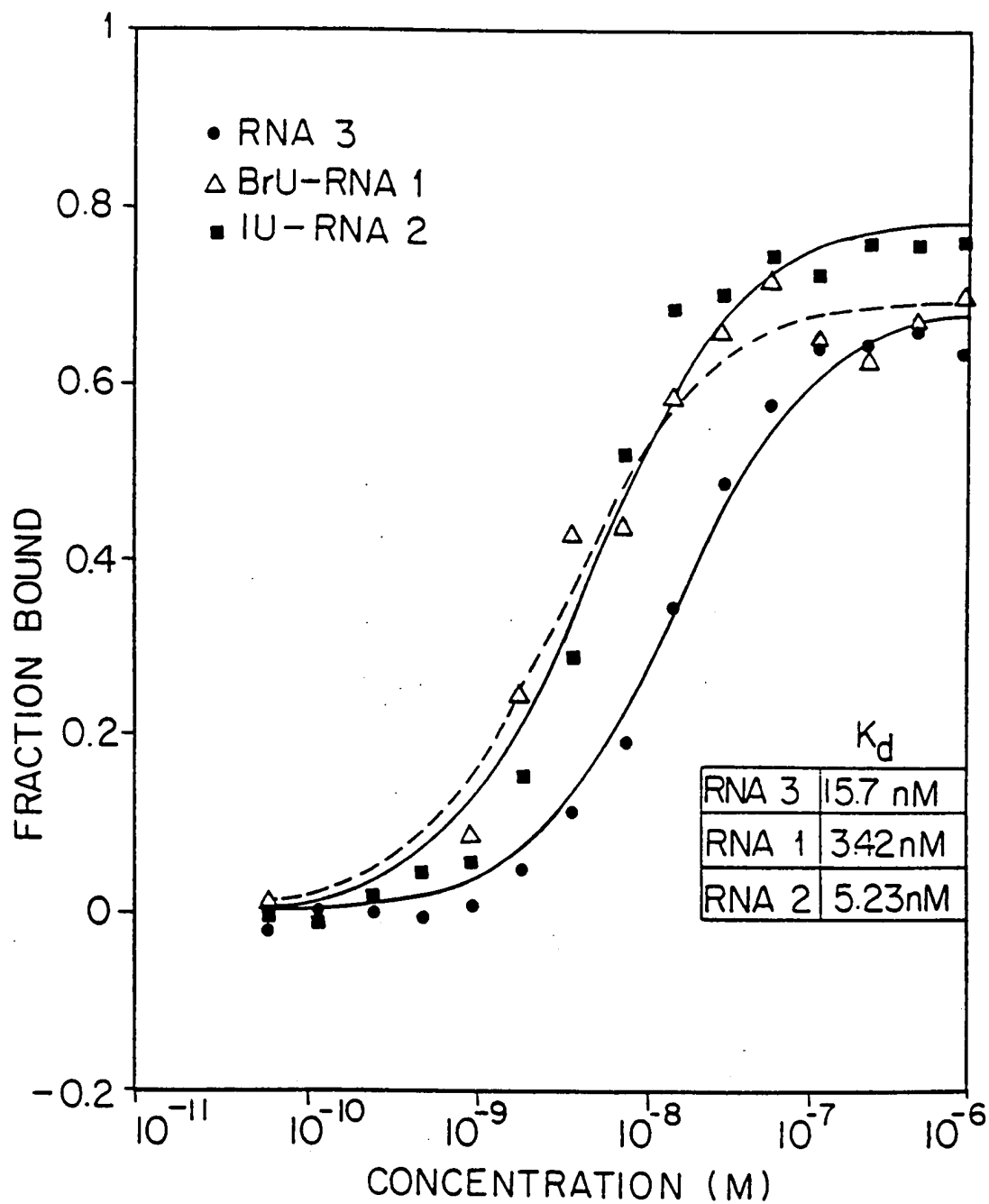


FIG. 7

10/35

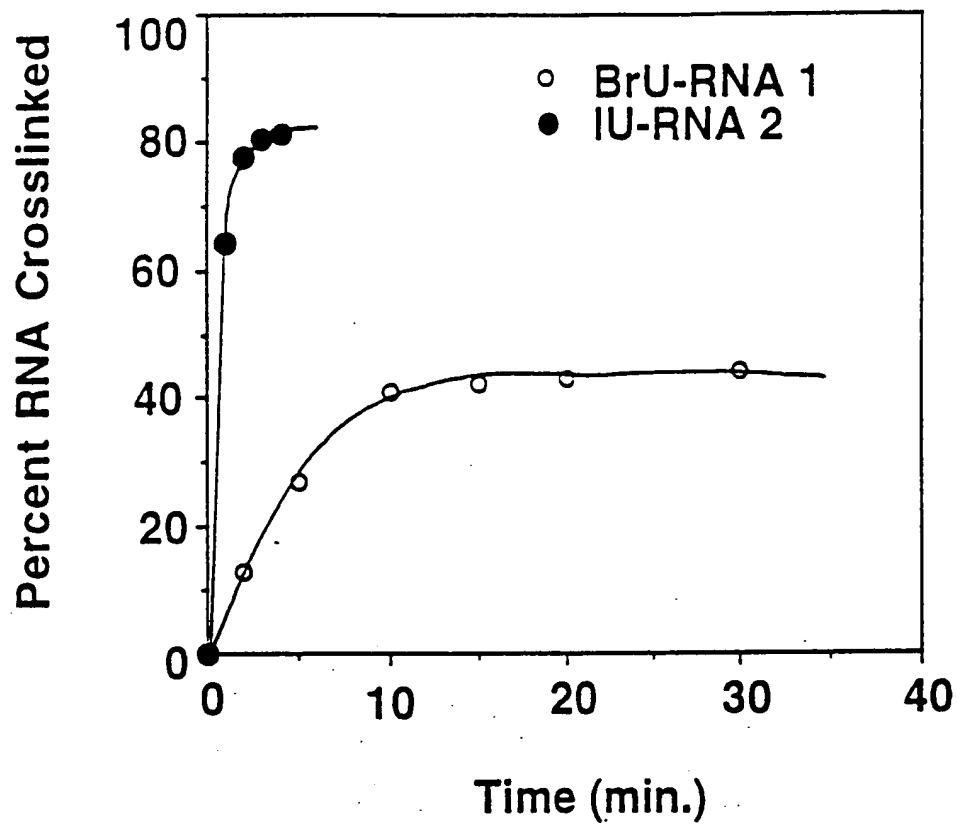


FIG. 8

11/35

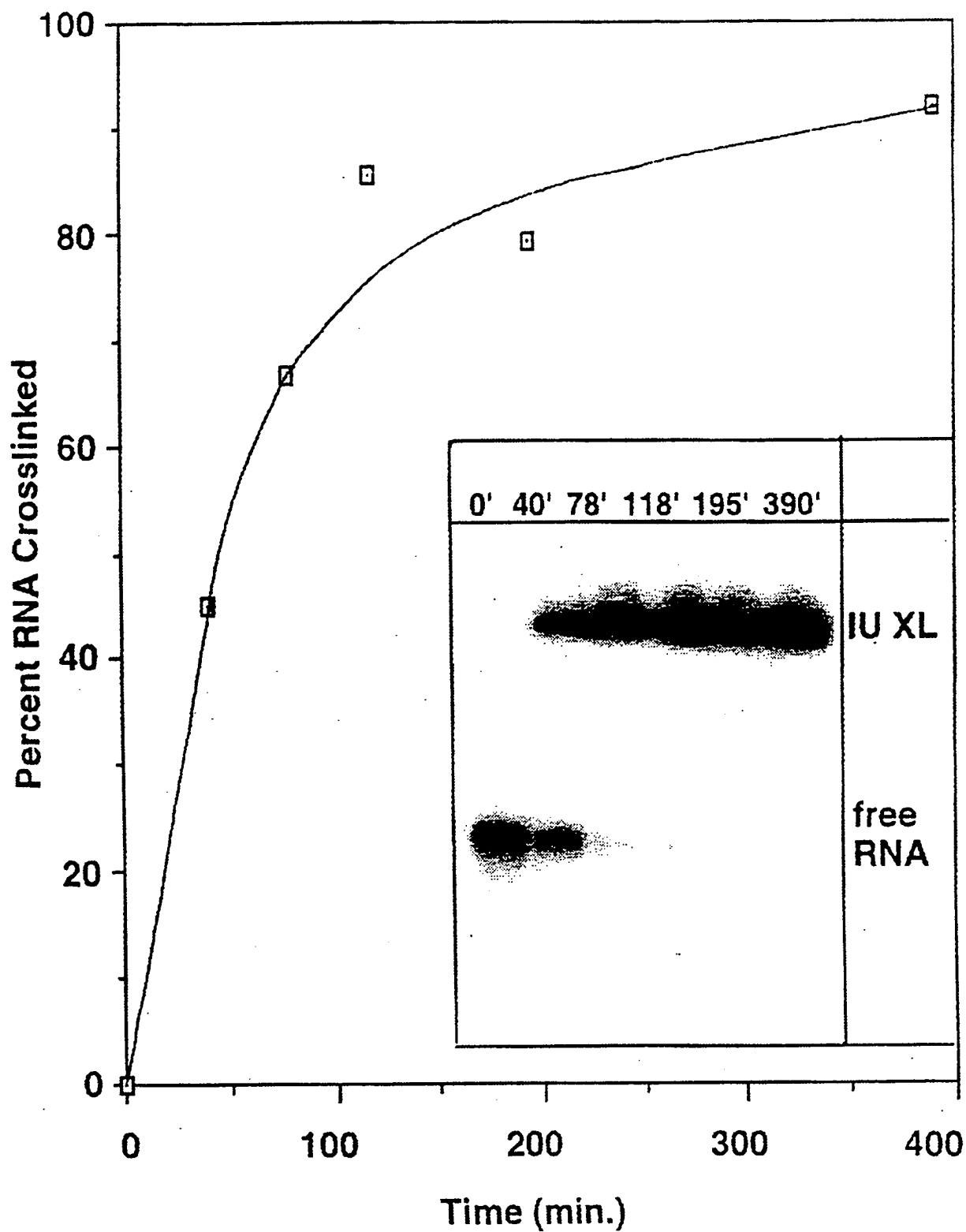


FIG. 9

12/35

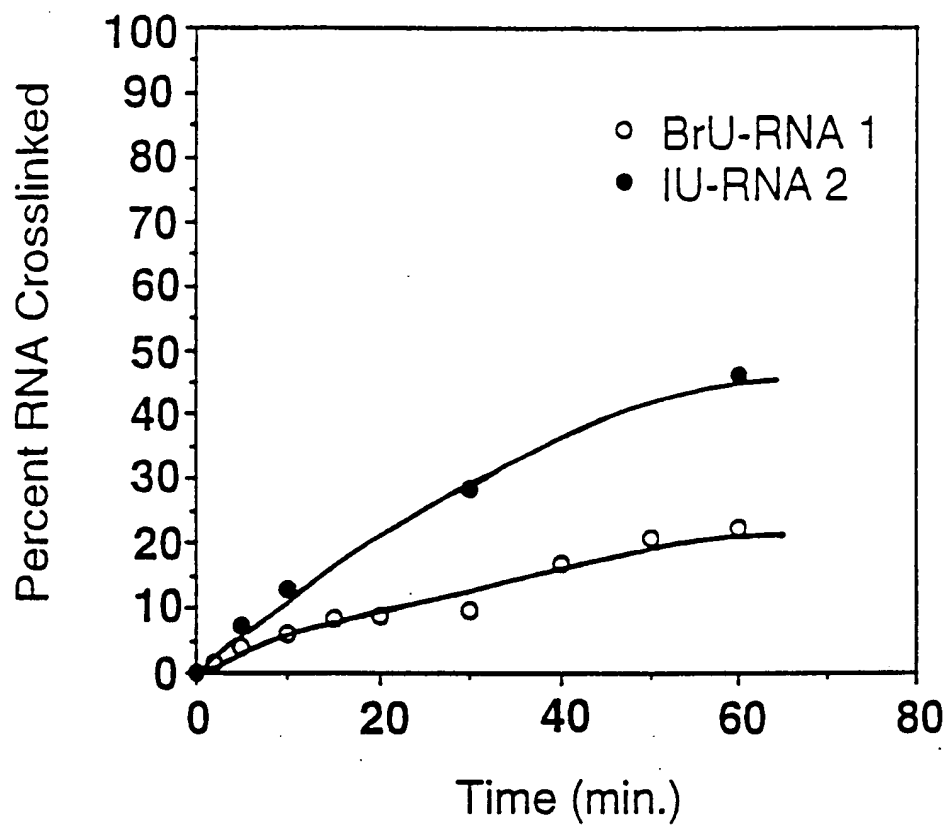


FIG. 10

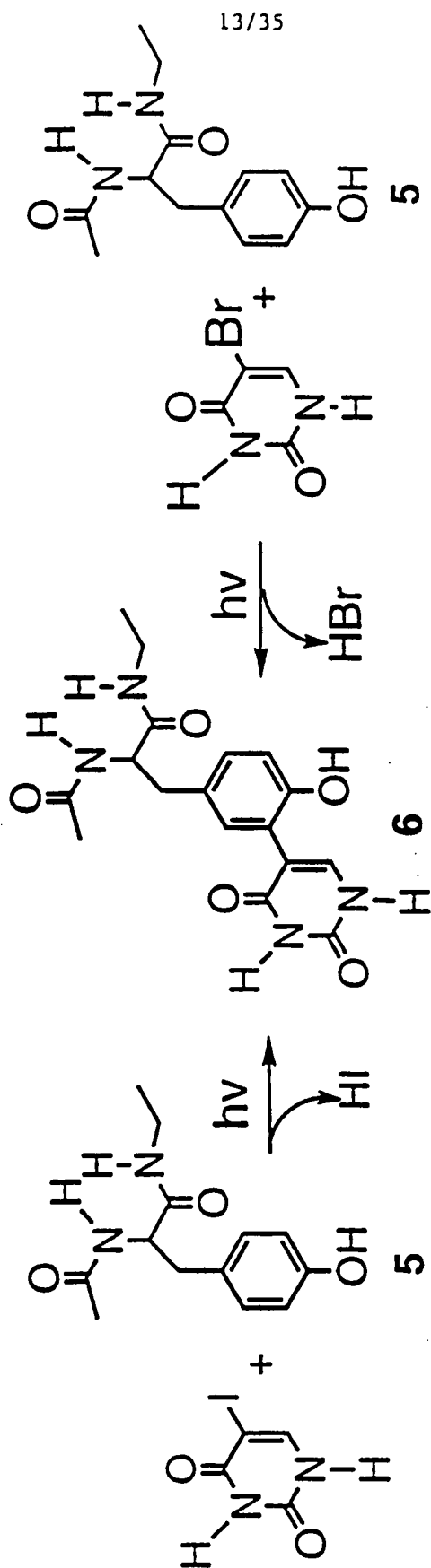


Fig. 11

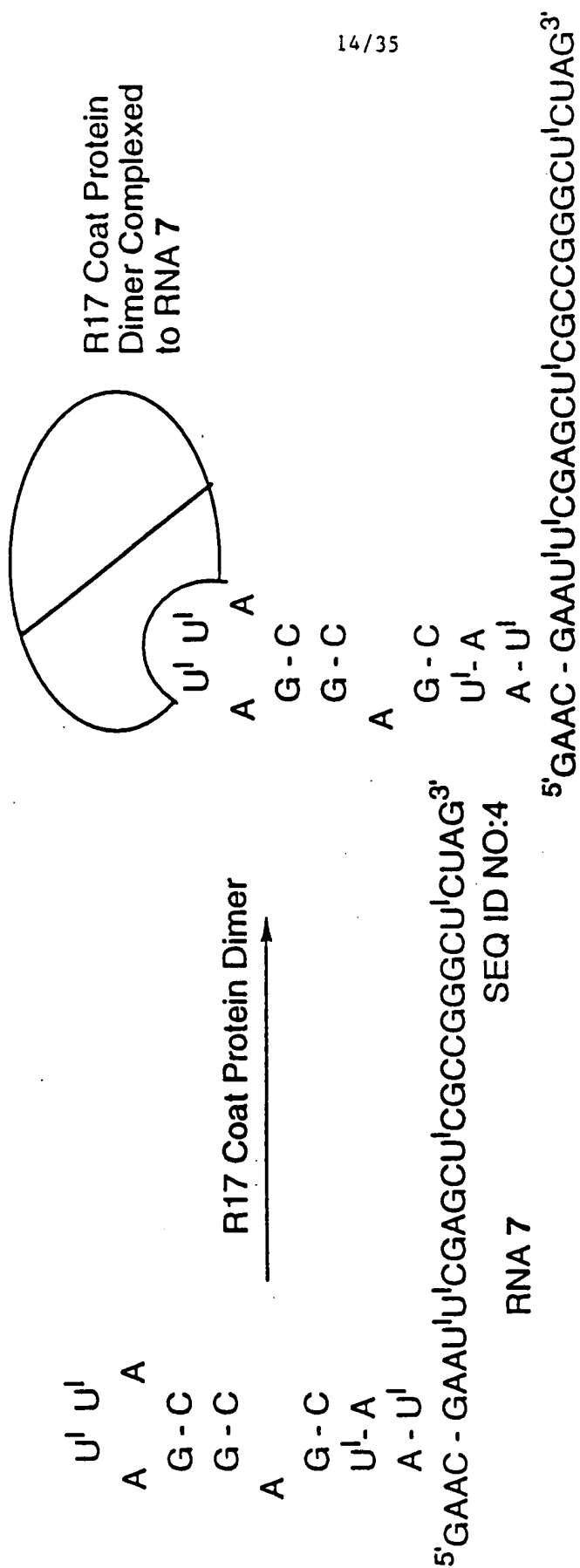


FIG. 12

15/35

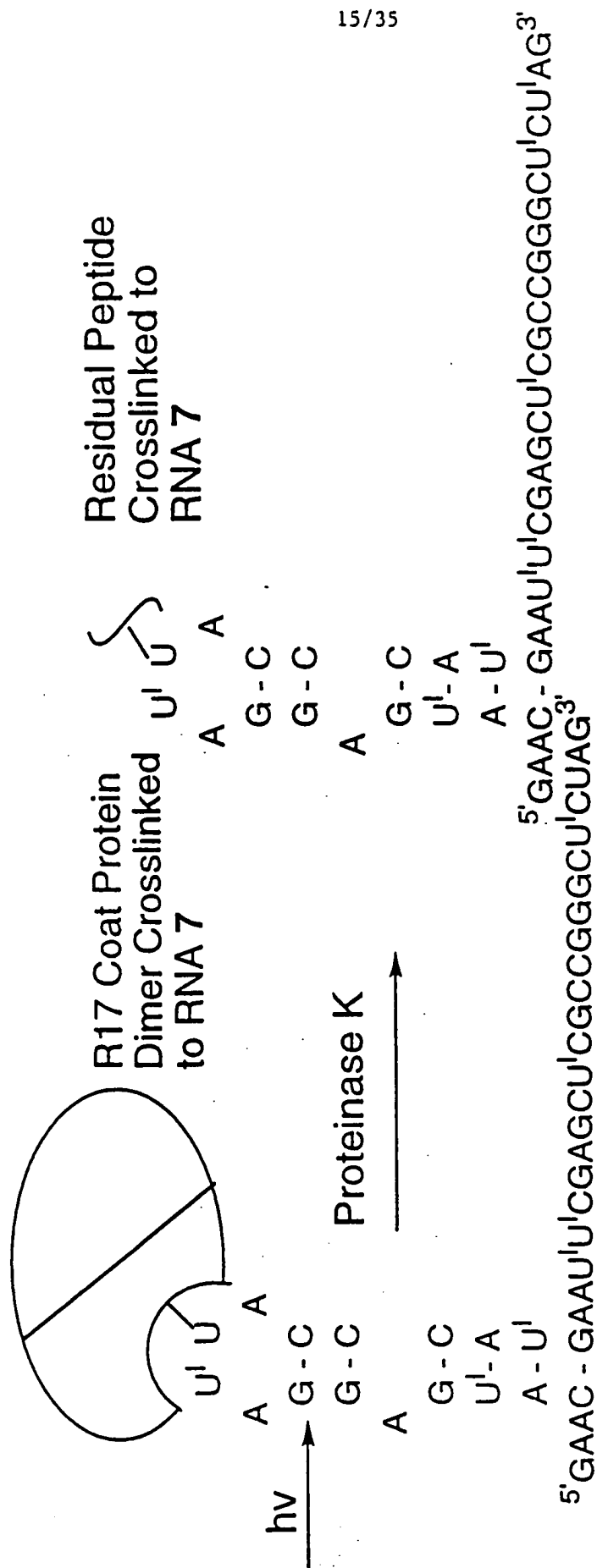


FIG. 12 (CONT'D)

SEQ ID NO:
 5' GAACAU'GAGGAU'U - ACCCAU'GAAU'U'CGAGCU'CGCCCGGGCU'CU'AG 3' 4
 3' CGGGCCCCGA GA TC 63
 RNA template
 DNA primer

NTPs | Reverse Transcriptase

RNA
 5' GAACAU'GAGGAU'U - ACCCAU'GAAU'U'CGAGCU'CGCCCGGGCU'CU'AG 3' 4
 3' CTTGTACTCCTA A-TGGGTA CTTA A GCTCGA GCGGGCCCCGA GATC 64
 cDNA

0.2 M
 NaOH
 100°C

3' CTTGTACTCCTA ATGGGTACTTAAGCTCGA GCGGGCCCCGA GATC 5' 64
 cDNA

FIG. 13

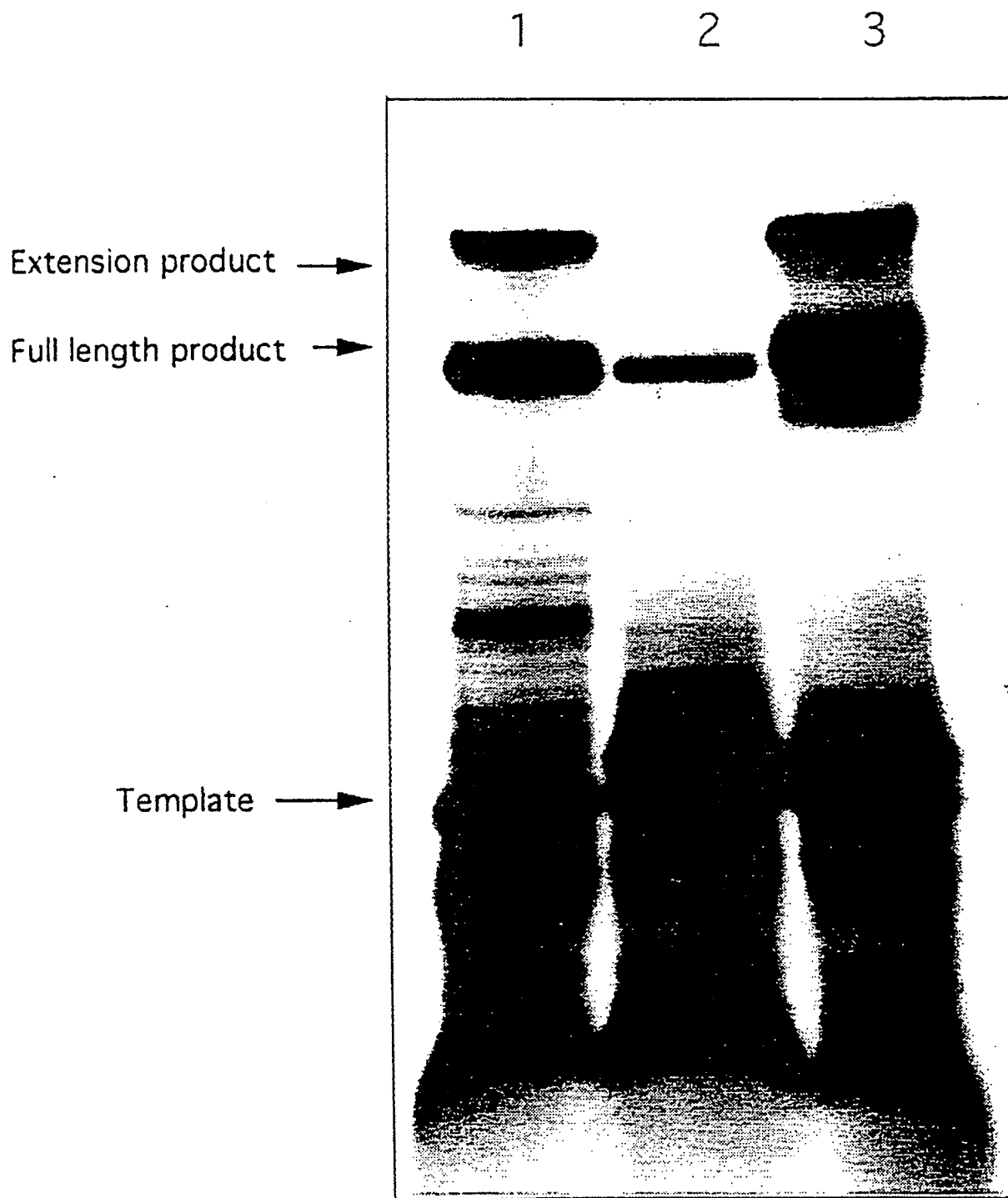


FIG. 14
SUBSTITUTE SHEET (RULE 26)

008211 8142260

008277-37/2E2460

rd1 rd7 rd10 rd13 PK noiU rd13 rd13

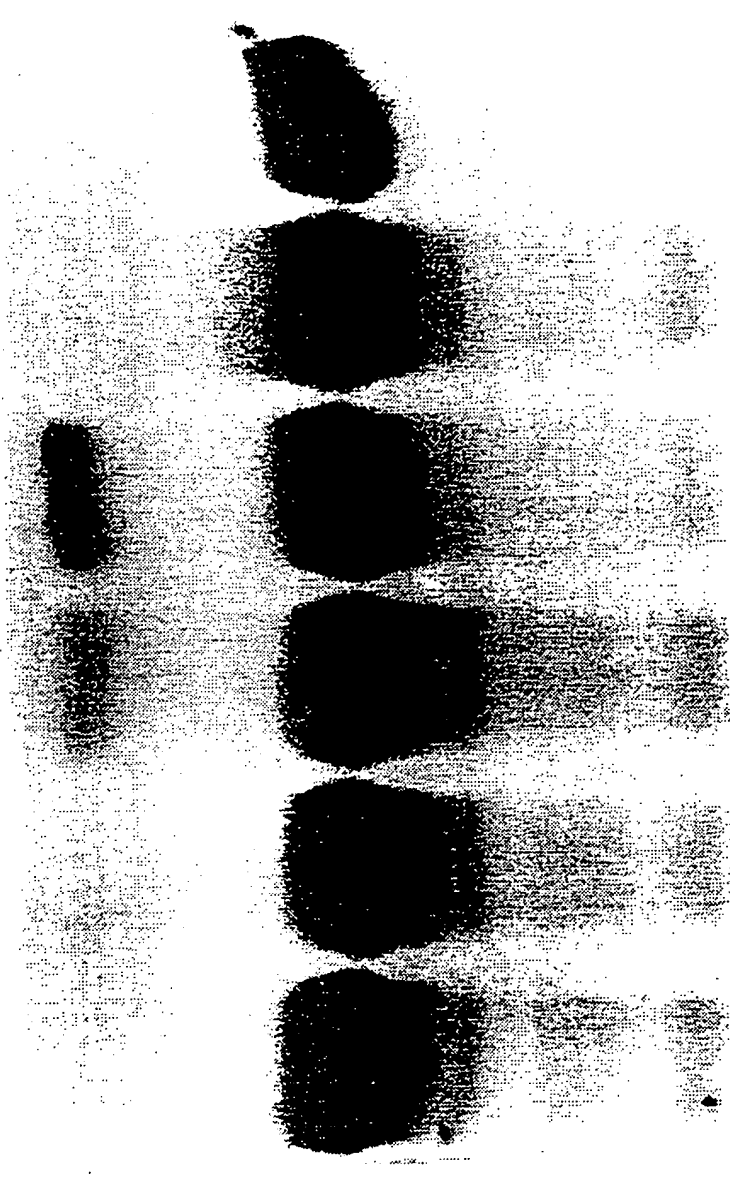


FIG. 15

SEQ ID NO:

5

gggugcauugagaaacacguuguggacucuguauc

6a

LI-XL

class 1

6

agguacgauuAACAg--acgacUGUUaacggccuaccu

a : 49

7

uacggcuuACAagcaccauUGUUaaccuagugccu

65

8

gaguggcuuACAagcaccauUGUUaaccuaguaccu

11

9

gugcagauuACAacaac-guUGUUaaccuccucucu

25

10

+

cuguggauuACAggcacacccUGUUaaccguguaccu

*24

11

cuguggauuACAggcacacccUGUUaaccguguaccc

38

12

agacgauuACAuccacggaUGUUaacgcgcuagaa

58

13

-

aagacgauuACAaacacgguUGUUaacgcacacaccu

6

14

+

gauuggauuACAggcacccUGUUaa-ccuaccacu

66

15

aggaggauuACAacaaggguUGUUaacccguacca

45

16

-

ugaaggauuACAacuaauguUGUUaacccauga

40

17

uugaggauuACAggcacaccUGcUaaccguguaccc

52

18

auguggcuuACAaguacgcuUGUUaacccaaaacg

27

19

aggacgauuACAaacacgguUGUUacgcccaugc

20

20

+

gacuggcuuACAacauguuuUGUUaaccguguacca

41

21

cggcgauuACACgacacacucgUGUUaacccaauauc

33

FIG. 16

SEQ ID NO:

b : 17	<u>gcaucagaugAACAgcacgucUGUUcacuaugcacc</u>	-	22
57	<u>gcaucagaugAACAgcacgucUGUUcacuaugcacc</u>		23
42	<u>gcaucagaugAACAgcacgucUGUUcacuaugcacc</u>		24
3	<u>caguquaugaAACACcaccgugUGUUuccacugucc</u>		25
37	<u>caguquaugaAACAAcacgugUGUUuccacugucc</u>		26
4	<u>gaguquaugaAACAAcacgugUGUUuccacugucc</u>		27
36	<u>gaguquaugaAACAAcacgugUGUUuccacugucc</u>		28
44	<u>gauuquaugaAACAAcgugugUGUUuccacugucc</u>		29
7	<u>gauuquaugaAACAAcacgugUGUUuccacugucc</u>		30
51	<u>gauuaggacuuAACAgacaccccUGUUAaccuaccacu</u>		31
c : 15	<u>ugcgacaguuaagaAACACgauUGUUuacuguaug</u>		32
47	<u>uacaggccuuaagaAACACgugUGUUAaccaaccccu</u>		33
14	<u>ucgagcagugugaAACACgauugUGUUuccugcuca</u>		34
62	<u>ugaugccuagagaAACACauuagUGUUucccucugu</u>	-	35
54	<u>acgugcccuagaAACACaucugaUGUUucccucuca</u>		36
56	<u>acccgccucgugaAACACgcuugaUGUUucccucuca</u>		37
48	<u>cggugacguaugaAACACgugucguUGaUUuccgu</u>	-	38
2	<u>gcuugcggaAACACgugugacgUGUUucccu</u>		39
10	<u>gcacccuagaAACGcgguuaguagacGUUucccu</u>		40

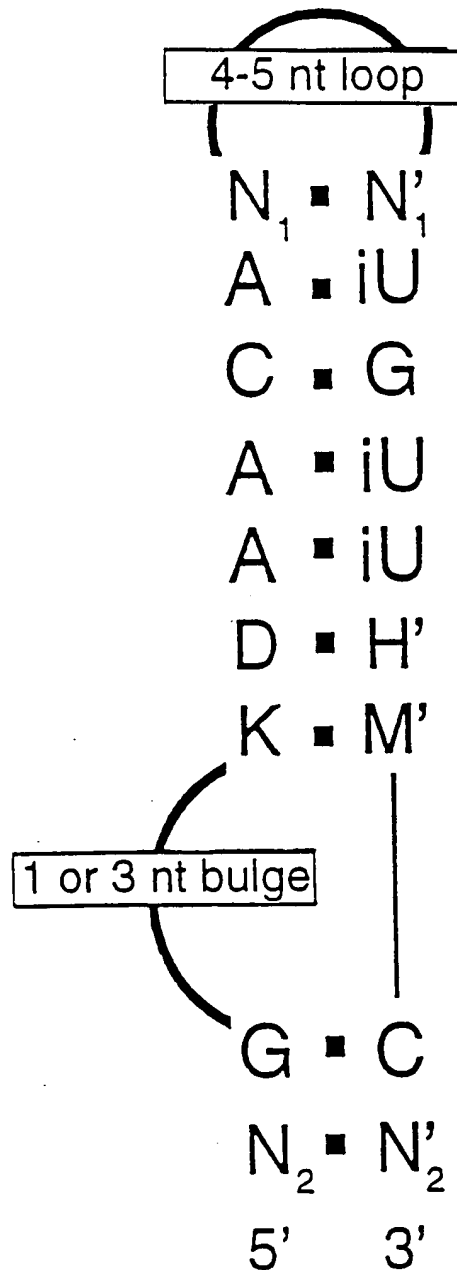
FIG. 16 (CONT'D)

		SEQ ID NO:
d :	22	aggaaccuagaAACacagUGUUuccucugcccac - 41
	26	gccugcauggauuAACacquauUGUUaaccgacucc 42
	*18	ugaAACAcugagaaacacgUGUUucccuugugau - 43
class	2	
	61	aGGAACCUCAAgccgccccuagaacacucggcaccu 44
	8	aGGAACCUCAAgaaagccccugaaacacucgaagccu - 45
	53	aGGAACCUCAAgaaacccccugaaacacucauuaccg - 46
	39	aGGAACCUCAAgaaauccggaacgacaacccuacaccu 47
	59	aGGAACCUCAAgaaacccccgccacggaccccaacca 48
	35	gGGAACCUCAAuauacacgcacgcacuaucucggcaucu 49
	29	gGGAACCUCAAgagacccgcaggaucucucggac 50
	46	aaguGGAACCUCAAucccguagaagauccuguaaccu 51
	9	augugcauagagauaguacauauGGAACCUCAGuagag - 52
	5	ucaugcauaggcauaggcagauGGAACCUCAGuagcc 53
	31	augugcaacaaggcgacggauaaGGAACCUCAAGu 54
	19	gaguacagcacgcaacacgcuacggGGAACCUCAAagu 55

FIG. 16 (CONT'D)

22/35

class 1 consensus

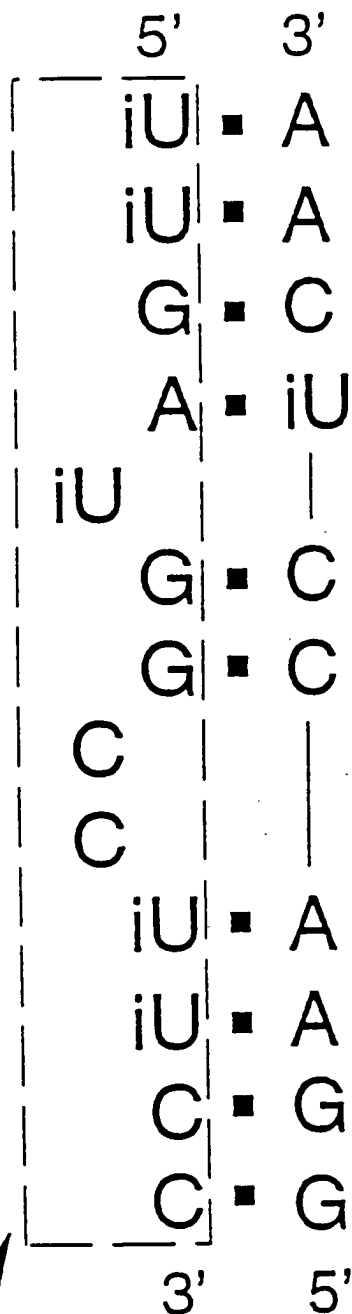


SEQ ID NO:56

FIG. 17

23/35

class 2 consensus



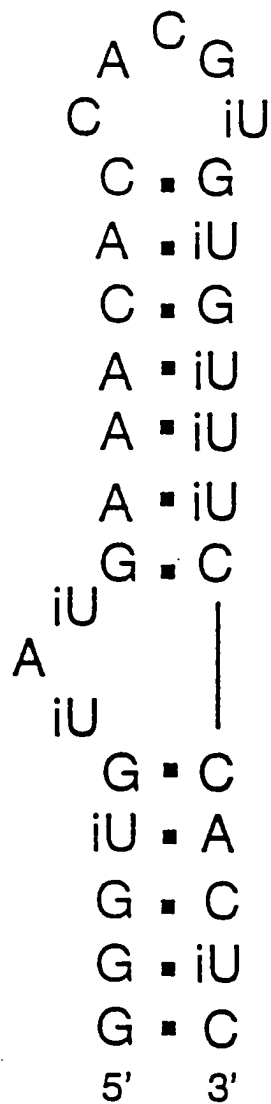
5' fixed region

SEQ ID NO:57

FIG. 17 (CONT'D)

008218.11800

24/35



trunc2

SEQ ID NO:58

FIG. 18A

09723718.11300

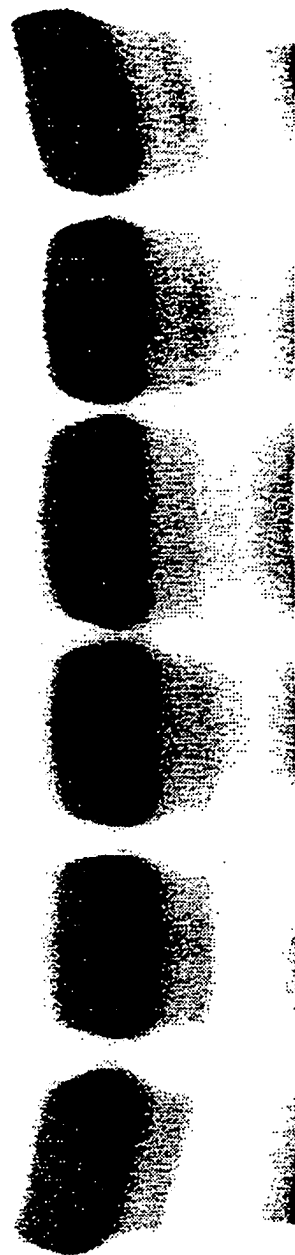
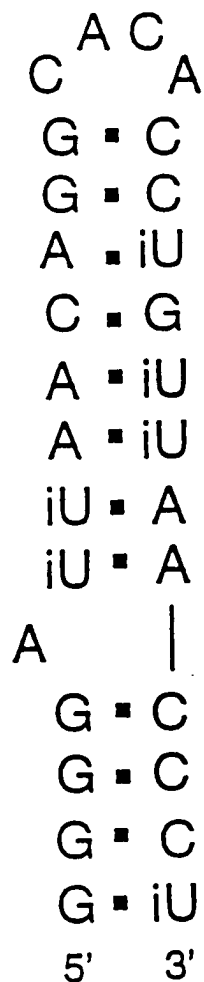
[illegible]

FIG. 18B

26/35



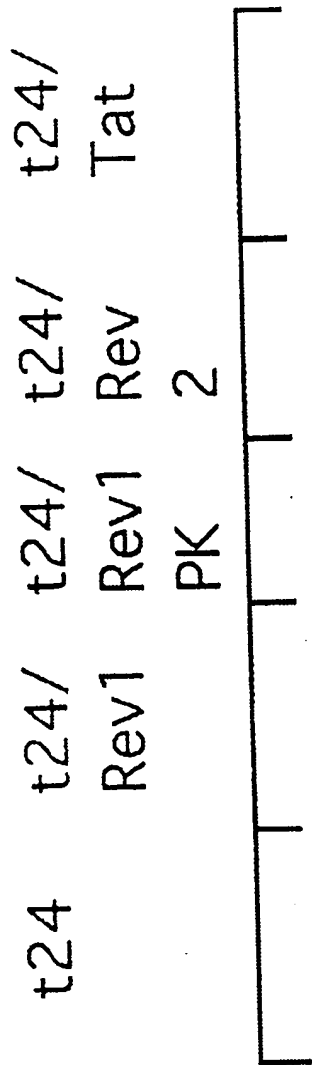
trunc24

SEQ ID NO:59

FIG. 19A

00922713-11200

003211-8122450



XL →

R →



FIG. 19B

HIV-1 Rev - - + + + +
500 nM 100 nM 50 nM
1 µg 200 ng 100 ng

nuclear extract

XL-

RNA-

FIG. 20

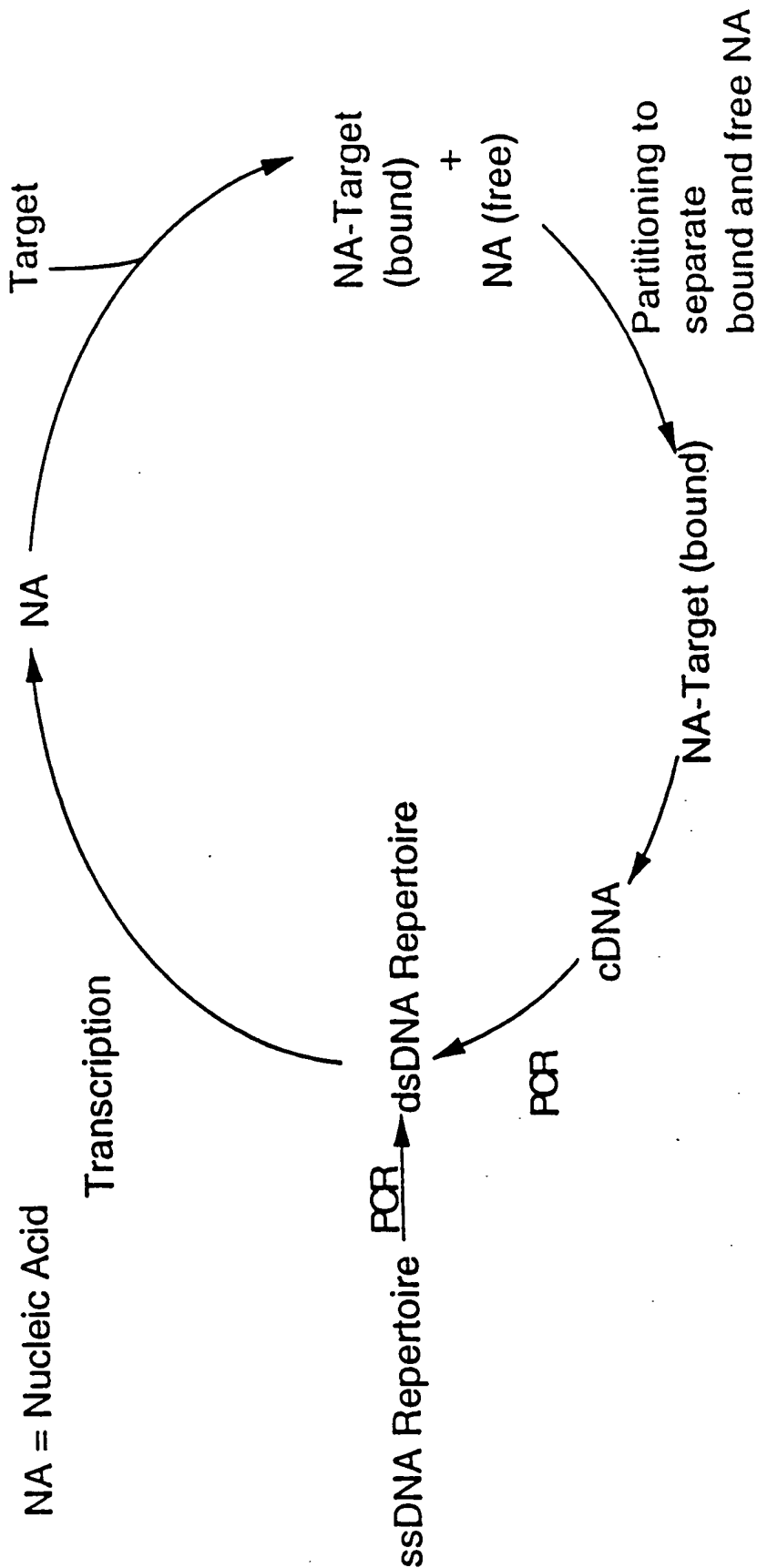


FIG. 21

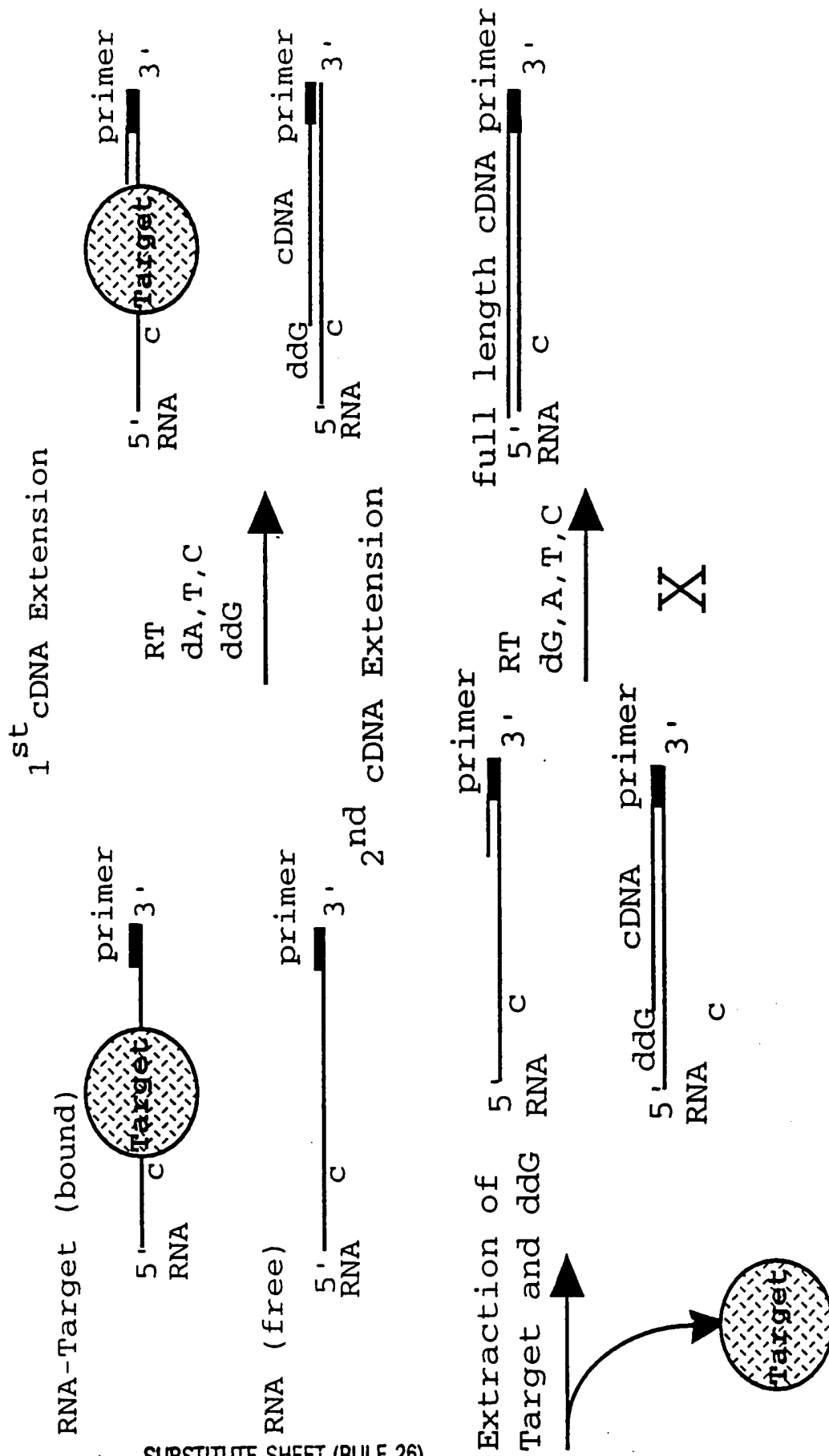


FIG. 22

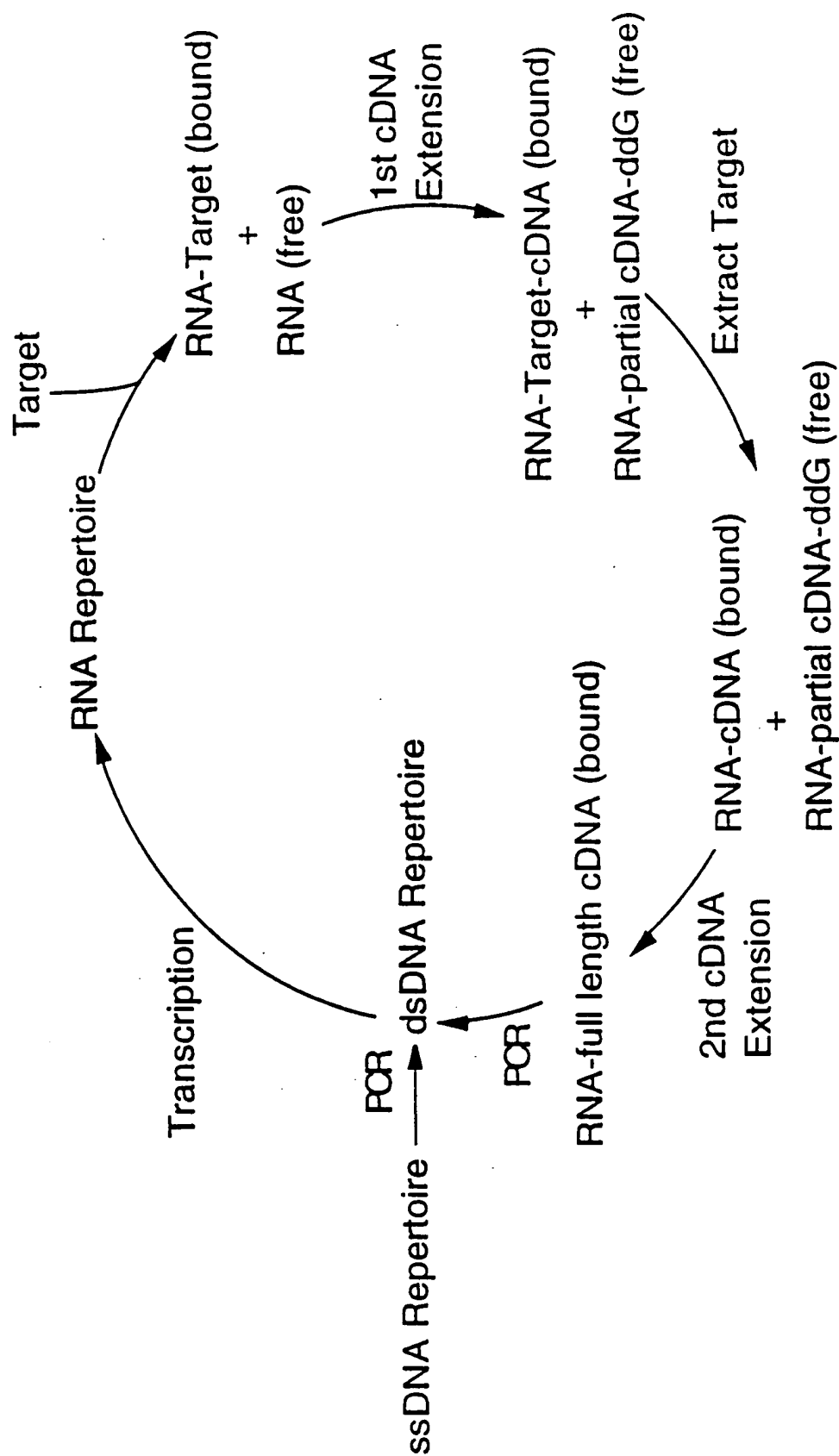
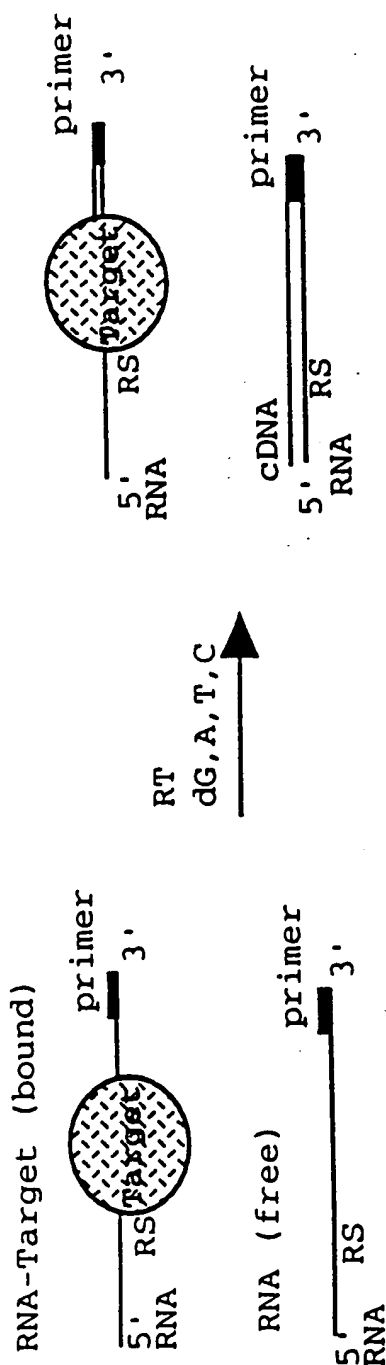


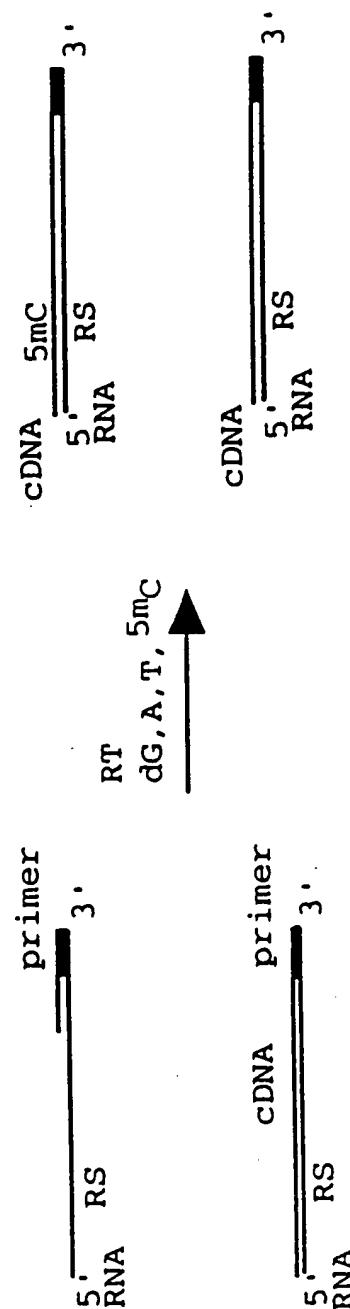
Figure 23

1st cDNA Extension



Extraction of
Target and dNTP

2nd cDNA Extension



1. Restriction Digest
2. PCR Amplification

X

Figure 24

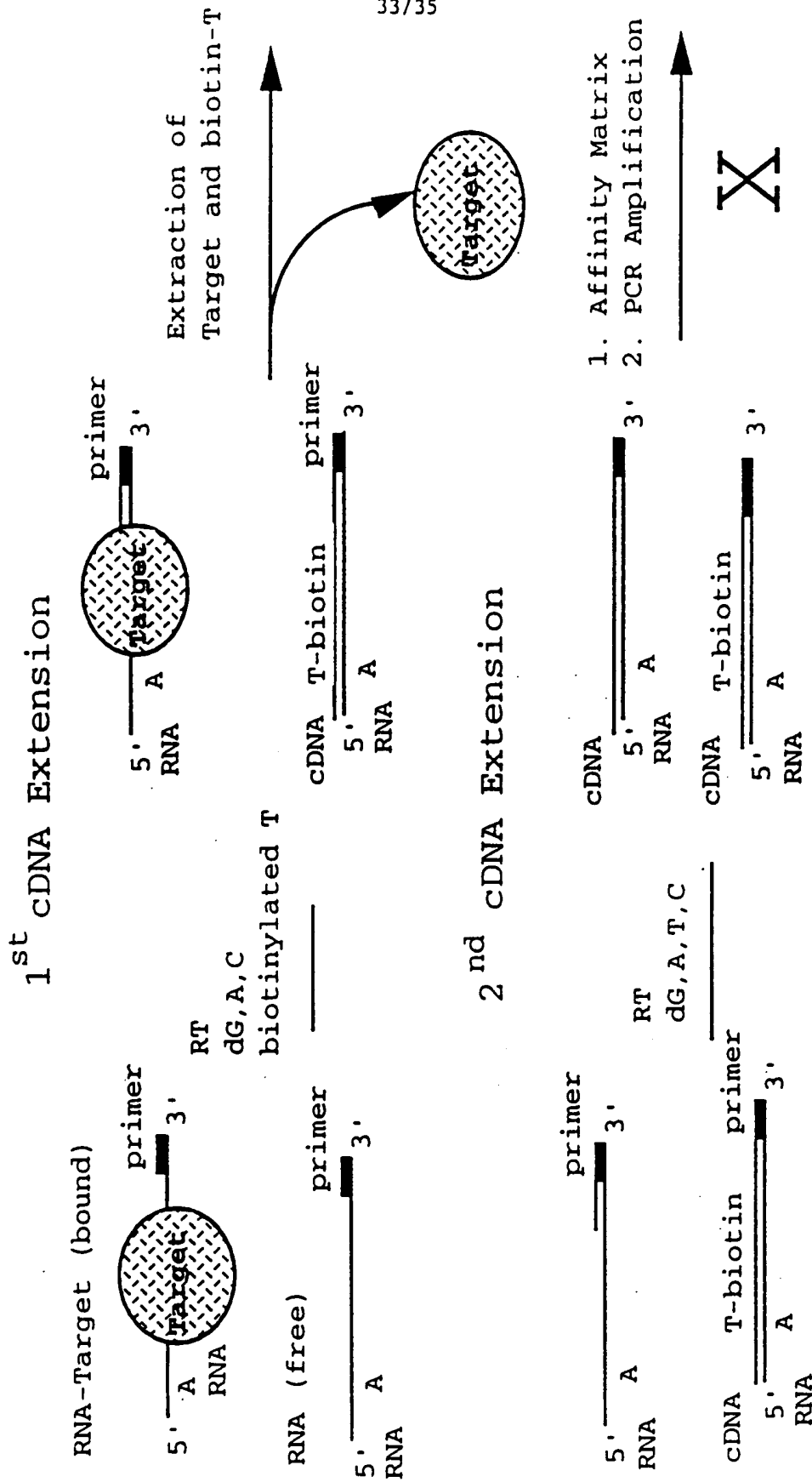


FIG. 25

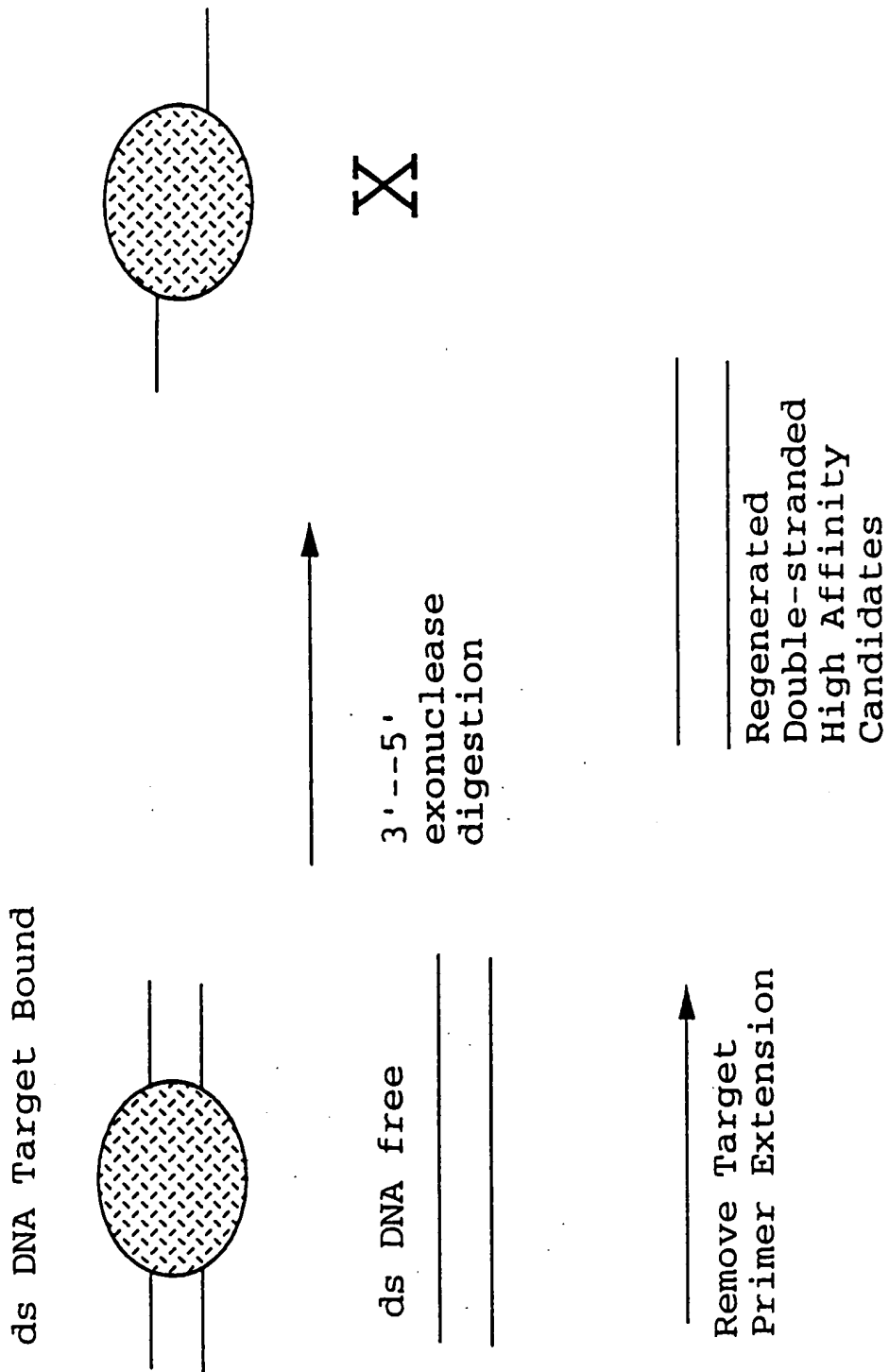


FIG. 26

35/35

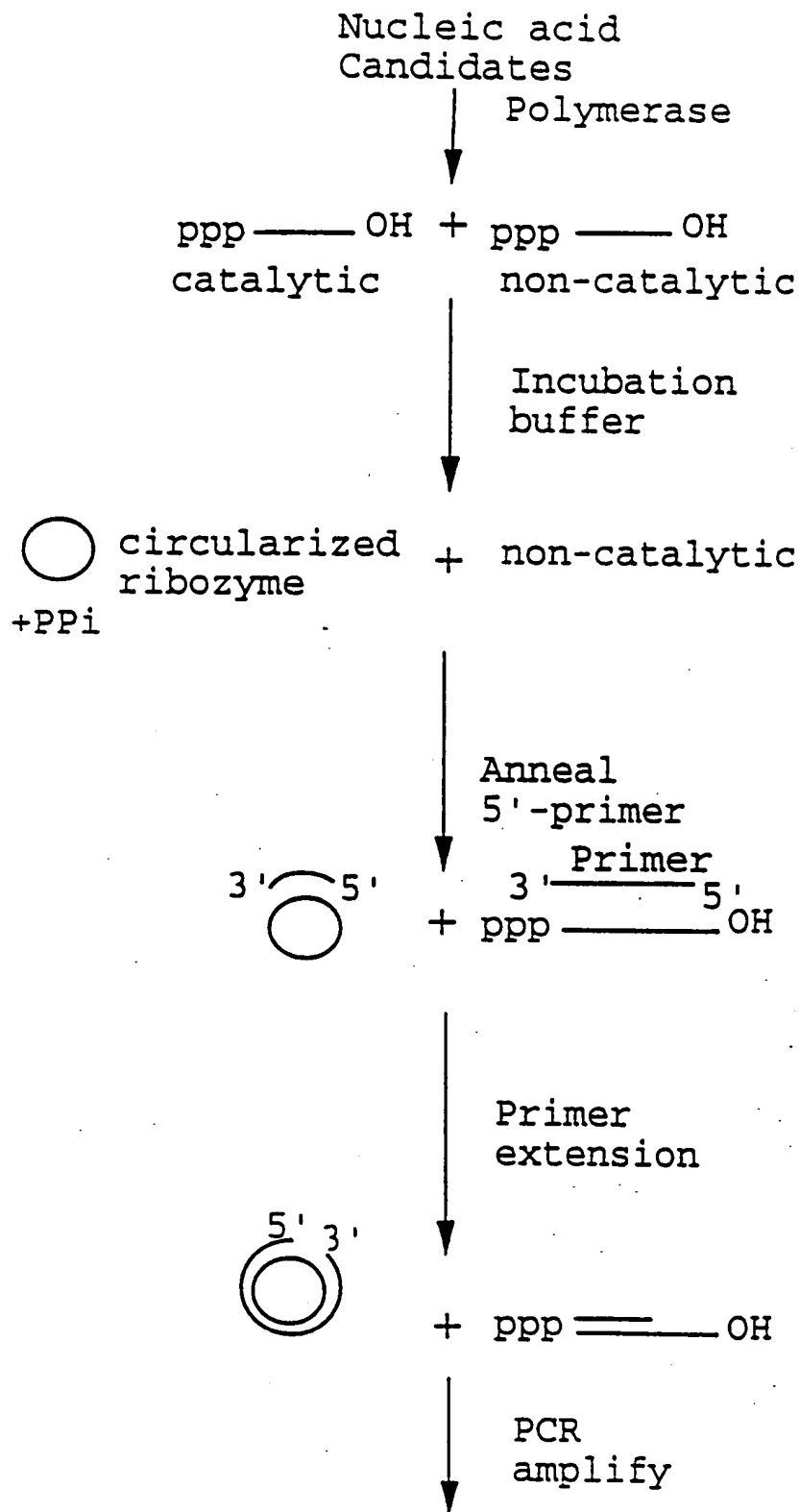


FIG. 27